4th Grade Pacing Module 5 *with Suggested Modifications* **Key**

Optional Lesson

Extension Lesson

Remedial Lesson



|  |  |  |  |
| --- | --- | --- | --- |
| Standards | Topic and Objectives | |  |
| **4.NF.3b**  **4.NF.4a**  4.NF.3a | A | Decomposition and Fraction Equivalence  Lesson 1–2: Decompose fractions as a sum of unit fractions using tape diagrams.  Lesson 3: Decompose non-unit fractions and represent them as a whole number times a unit fraction using tape diagrams.  Lesson 4: Decompose fractions into sums of smaller unit fractions using tape diagrams.  Lesson 5: Decompose unit fractions using area models to show equivalence.  Lesson 6: Decompose fractions using area models to show equivalence. | **Days: 4**  **Lessons 1-2:** Combine the concept development of lesson 1 and lesson 2. Use the problem set from lesson 2.  ***Teacher Prep***: Have student and teacher materials prepared prior to lesson.  **Optional Lesson 4:** Concepts developed in lessons 1-3. |
| By the end of Topic A, your students should be able to:   * Decompose a fraction into a sum of fractions with the same denominator * Decompose fractions using the area model to show equivalent fractions   Sample Assessment Standard 4.NF.3b Sample Assessment Standard 4.NF.4a | | | |
| **4.NF.1**  4.NF.3b | B | Fraction Equivalence Using Multiplication and Division  Lessons 7: Use the area model and multiplication to show the equivalence of two fractions.  Lessons 8: Use the area model and multiplication to show the equivalence of two fractions.  Lessons 9: Use the area model and division to show the equivalence of two fractions.  Lessons 10: Use the area model and division to show the equivalence of two fractions.  Lesson 11: Explain fraction equivalence using a tape diagram and the number line, and relate that to the use of multiplication and division. | **Days: 5** |
| By the end of Topic B, your students should be able to:   * Use area, multiplication and division, number line, or models to show and explain the equivalence of two fractions   **SBAC Released Item 4.NF.1** | | | |
| **4.NF.2** | C | Fraction Comparison  Lessons 12: Reason using benchmarks to compare two fractions on the number line.  Lessons 13: Reason using benchmarks to compare two fractions on the number line.  Lessons 14: Find common units or number of units to compare two fractions.  Lessons 15: Find common units or number of units to compare two fractions. | **Days: 4**  **Lessons 12 & 13 *Teacher Prep***: Have student and teacher materials prepared prior to lesson (number lines).  **Hands on Activity:**  [Picking Fractions](http://www.insidemathematics.org/assets/common-core-math-tasks/picking%20fractions.pdf) |
| By the end of Topic C, your students should be able to:   * Understand that in order to compare fractions, the 2 fractions refer to the same whole * Compare 2 fractions using benchmarks * Compare fractions through finding common denominators   **Sample Assessment 4.NF.2** | | | |
| **4.NF.3a**  **4.NF.3d**  4.NF.1  4.MD.2 | D | Fraction Addition and Subtraction  Lesson 16: Use visual models to add and subtract two fractions with the same units  Lesson 17: Use visual models to add and subtract two fractions with the same units, including subtracting from one whole.  Lesson 18: Add and subtract more than two fractions.  Lesson 19: Solve word problems involving addition and subtraction of fractions.  Lessons 20-21: Use visual models to add two fractions with related units using the denominators 2, 3, 4, 5, 6, 8, 10, and 12.  Combine Lessons 20 and 21  1 Day Math Task: [Chocolate Bar Fractions](http://schools.nyc.gov/NR/rdonlyres/0C0422CA-DBAF-4476-928F-71102DB2F703/140801/NYCDOE_G4_ChocolateBarFractions_FINAL.pdf) | **Days: 5**  **Lessons 20-21:** Combine the concept development of Lesson 20 and Lesson 21. Use the problem set page 1 from both Lesson 20 and 21 and the sprint from Lesson 21. |
| By the end of Topic D, your students should be able to:   * Use visual models to add and subtract fractions * Use visual models to subtract a fraction from one whole * Add and subtract fractions where one denominator is a multiple or factor of the other (denominators: 2, 3, 4, 5, 6, 8,12, 10, 100)   **Sample Assessment 4.NF.3a Sample Assessment 4.NF.3d** | | | |
| *2 Days for Remediation, Enrichment, Mid-Module Assessment*  [Mid-Module Assessment Word Document](https://www.engageny.org/resource/grade-4-mathematics-module-5)  **Suggested Tasks:**   * [Got Your Number, Level C](http://insidemathematics.org/problems-of-the-month/pom-gotyournumber.pdf) This task (and the ones at the end of the unit) covers a variety of standards from this module. Any of these tasks could be used at any point in the module, depending on the needs of your students. | | | |
| **4.NF.1**  **4.NF.2**  **4.NF.3**  4.NBT.6  4.NF.4a  4.MD.4 | E | Extending Fraction Equivalence to Fractions Greater than 1  Lesson 22: Add a fraction less than 1 to, or subtract a fraction less than 1 from, a whole number using decomposition and visual models.  Lesson 23: Add and multiply unit fractions to build fractions greater than 1 using visual models.  Lessons 24: Decompose and compose fractions greater than 1 to express them in various forms.  Lessons 25: Decompose and compose fractions greater than 1 to express them in various forms.  Lesson 26: Compare fractions greater than 1 by reasoning using benchmark fractions.  Lesson 27: Compare fractions greater than 1 by creating common numerators or denominators.  Lesson 28: Solve word problems with line plots. | **Days: 7** |
| **4.NF.3c**  **4.NF.3d**  4.MD.2 | F | Addition and Subtraction of Fractions by Decomposition  Lesson 29: Estimate sums and differences using benchmark numbers.  Lesson 30: Add a mixed number and a fraction.  Lesson 31: Add mixed numbers.  Lesson 32: Subtract a fraction from a mixed number  Lesson 33: Subtract a mixed number from a mixed number.  Lesson 34: Subtract mixed numbers. | **Days: 5**  **Lesson 29:** Estimation is not assessed through the standard in this module |
| By the end of Topic F, your students should be able to:   * Choose from a variety of strategies to add and subtract mixed numbers   **Snapshot Assessment 4.NF.3a & b Problems 3 and 4**  **Examples:** | | | |
| **4.NF.4**  **4.MD.4**  4.OA.2  4.MD.2 | G | Repeated Addition of Fractions as Multiplication  Lessons 35: Represent the multiplication of *n* times *a*/*b* as (*n* × *a*)/*b* using the associative property and visual models.  Lessons 36: Represent the multiplication of *n* times *a*/*b* as (*n* × *a*)/*b* using the associative property and visual models.  Lessons 37: Find the product of a whole number and a mixed number using the distributive property.  Lessons 38: Find the product of a whole number and a mixed number using the distributive property.  Lesson 39: Solve multiplicative comparison word problems involving fractions.  Lesson 40: Solve word problems involving the multiplication of a whole number and a fraction including those involving line plots. | **Days: 6** |

|  |  |  |  |
| --- | --- | --- | --- |
| By the end of Topic G, your students should be able to:   * Use the associative property to multiply a fraction by a whole number * Use the distributive property to multiply a whole number by a mixed number * Solve word problems involving multiplicative comparisons and multiplication of a whole number and a fraction   **SBAC Released Items 4.NF.4 :** | | | |
| **4.OA.5** | H | Exploration  Lesson 41: Find and use a pattern to calculate the sum of all fractional parts between 0 and 1. Share and critique peer strategies. | **Days: 0**  **Lesson 41:** This standard is assessed in other modules. |
| *2 Days for Re-Assessment, Remediation and Enrichment*  **Suggested Tasks:**   * [Sugar in Six Cans of Soda](https://www.illustrativemathematics.org/content-standards/4/NF/B/4/tasks/857) * [Button Diameters](https://www.illustrativemathematics.org/content-standards/tasks/1039) * [What’s the Story](https://www.georgiastandards.org/Georgia-Standards/Frameworks/4th_Math-Unit-7.pdf) (use pg. 25)   [**End of Module Assessment Word Document**](https://www.engageny.org/resource/grade-4-mathematics-module-5)  **End of Module Assessment Notes: For pacing needs, items 5 and 6 may be omitted.** | | | |
| ***Total Instructional Days: 41*** | | | |

Links Used:

[Chocolate Bar Fractions](http://schools.nyc.gov/NR/rdonlyres/0C0422CA-DBAF-4476-928F-71102DB2F703/140801/NYCDOE_G4_ChocolateBarFractions_FINAL.pdf): <http://schools.nyc.gov/NR/rdonlyres/0C0422CA-DBAF-4476-928F-71102DB2F703/140801/NYCDOE_G4_ChocolateBarFractions_FINAL.pdf>

[Picking Fractions](http://www.insidemathematics.org/assets/common-core-math-tasks/picking%20fractions.pdf): <http://www.insidemathematics.org/assets/common-core-math-tasks/picking%20fractions.pdf>

[Got Your Number, Level C](http://insidemathematics.org/problems-of-the-month/pom-gotyournumber.pdf): <http://insidemathematics.org/problems-of-the-month/pom-gotyournumber.pdf>

[Sugar in Six Cans of Soda](https://www.illustrativemathematics.org/content-standards/4/NF/B/4/tasks/857): <https://www.illustrativemathematics.org/content-standards/4/NF/B/4/tasks/857>

[What’s the Story](https://www.georgiastandards.org/Georgia-Standards/Frameworks/4th_Math-Unit-7.pdf): <https://www.georgiastandards.org/Georgia-Standards/Frameworks/4th_Math-Unit-7.pdf>